AMENDMENTS TO THE SPECIFICATION

Please amend specification paragraph [0014] as follows:

--**[0014]** FIG. 4 illustrates a linearization ~~process~~ processor for use with image capture by a non-linear detector.--

Please amend specification paragraph [0020] as follows:

--**[0020]** A linearization ~~process~~ processor 110 linearizes data from detector 106. By way of example, if non-linear detector 106 is photographic film, linearization ~~process~~ processor 110 may include a digital scanner than scans the photographic image of intermediate image 103. In another example, if non-linear detector 106 is a non-linear digital detector (e.g., a CMOS array with a non-linear circuit, or detector elements with individual, non-linear responses), then linearization ~~process~~ processor 110 may include digital processing to linearize digital data from detector 106. In one embodiment, data from detector 106 is linearized by linearization ~~process~~ processor 110 to form linearized image 112 by utilizing *a priori* knowledge of the exposure curve of detector 106 (for example the gamma curve of photographic film as detector 106), and/or by measuring the exposure curve.--

Please amend specification paragraph [0023] as follows:

--**[0023]** As noted above, linearization ~~process~~ processor 110 may include digital scanning of non-linear detector 106 with a conventional digital scanner. An exemplary digital scanner configured for scanning photographic film as non-linear detector 106 may be a Nikon Super Coolscan 4000 film scanner at 4000 dots per inch, with a bit depth of 8-bits and with sixteen times averaging to reduce CCD array noise. An exemplary photographic film as non-linear detector 106 may be Kodak T-Max 100 black-and-white negative film, which may be developed with a Kodak T-Max developer in a 1:3 dilution for seven minutes at 72°F, prior to being digitally scanned, such as illustrated in FIG. 3.--

Please amend specification paragraph [0025] as follows:

--**[0025]** In one embodiment, linearization process 110 for a particular non-linear detector 106 begins with estimating the highest density in intermediate image 103 captured by detector 106. Alternatively, the highest density in intermediate image 103 is measured with a densitometer, such that density estimation is unnecessary. Then, using a part of the non-linear exposure curve of non-linear detector 106 that ranges from the lowest region of the curve (e.g., underexposed region 34A of curve 30, FIG. 3) to the estimated or measured highest density (e.g., region 34B, FIG. 3), a look up table is constructed by solving for integer values of the non-linear exposure curve to map its values to generate linearized image 112.--

Please amend specification paragraph [0026] as follows:

--**[0026]** Linearized image 112 may be generated by the linearization process 200 shown in FIG. 4. At step 202, a non-linear exposure curve is generated by capturing a series of images of uniform intensity across an image plane of system 100, to create a uniform density on film. The captured images vary by exposure time and are digitally scanned and utilized within linearization ~~process~~ processor 110. With the non-linear exposure curve, at step 204, the density values are converted to grey values. Then, at each sample image captured on the non-linear exposure curve, the grey value is used as an address in a lookup table, and the value of a linear curve at that sample image is used as the data at that address in the lookup table, at step 206. Using this lookup table, the captured images are scanned through, and the grey value of each pixel that originally resided on the non-linear exposure curve is swapped with the linearized value entered at the corresponding address in the lookup table, at step 208.--